BAS16, BAS19, BAS20, BAS21

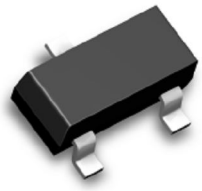
Surface Mount Switching Diodes

Voltage 75 to 200 Volts Power 350 mWatts

FEATURES

- Fast switching speed.
- Surface mount package ideally suited for automatic insertion
- Electrically identical to standard JEDEC
- High conductance

SOT-23



MECHANICAL DATA

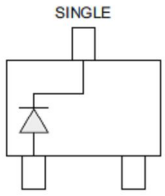
- Case: SOT-23, plastic
- Terminals: Solderable per MIL-STD-202, Method 208
- Approx. weight: 0.008 grams
- Marking: A6, A8, A80, A82

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

PARAMETER	SYMBOL	BAS16	BAS19	BAS20	BAS21	UNITS
Reverse Voltage	V_R	75	100	150	200	V
Peak Reverse Voltage	V_{RM}	100	120	200	250	V
Rectified Current(Average), Half wave Rectification with Resistive Load and f>=50 Hz	Io	250	200	200	200	mA
Peak Forward Surge Current, tp = 1.0us	I_{FSM}	2.0	2.5	2.5	2.5	A
Power Dissipation Derate Above 25°C	P_{tot}	350	350	350	350	mW
Maximum Forward Voltage @I_F=10mA @I_F=100mA	V_F	0.855 -	- 1.0	- 1.0	- 1.0	V
Maximum DC Reverse Current at Rated DC Blocking Voltage T_J=25°C	I_R	1.0	0.1	0.1	0.1	μA
Typical Junction Capacitance(Notes1)	C_J	2.0	1.5	1.5	1.5	pF
Maximum Reverse Recovery (Notes2)	t_{rr}	6	50	50	50	ns
Maximum Thermal Resistance	$R_{\theta JA}$	357	375	375	375	°C/W
Storage Temperature Range	T_J , T_{ST}	-55 to + 125				°C

NOTE : 1. CJ at Reverse Voltage = 0. f=1MHz
2. From I_F=10mA to I_R=-1mA. V_R=6V. R_L=100Ω



BAS16, BAS19, BAS20, BAS21

Characteristic and Rating Curve

Fig.1 Forward Voltage

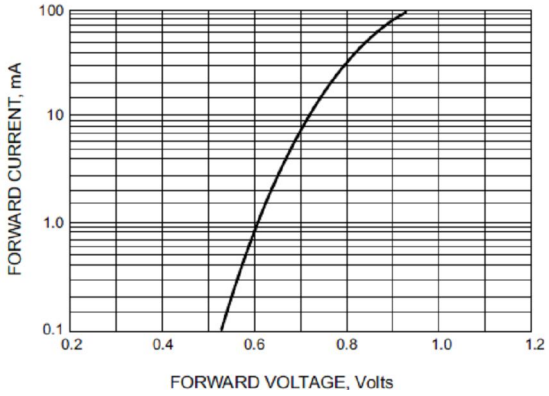


Fig.2 Leakage Current

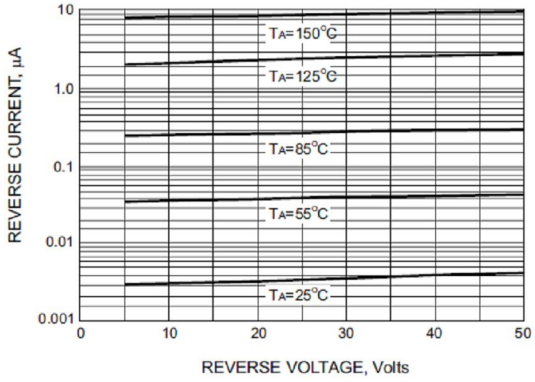
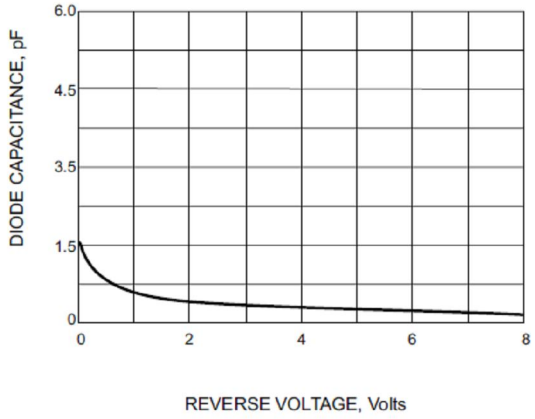
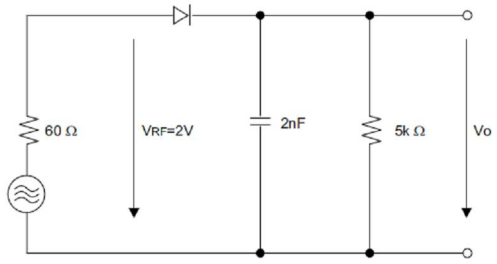


Fig.3 Typical Capaticance





RECTIFICATION EFFCIENCY MEASUREMENT CIRCUIT